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JFW  
Docket No.: 600.1048  
Date: December 7, 2004

In re application of: **SOMERS et al.**  
Serial No.: 09/551,445  
Filed: April 18, 2000  
For: **FOLDING CYLINDER WITH EXPANSION SEGMENT**

Sir:

Transmitted herewith is an **Appeal Brief in Triplicate (10 pages each copy)** in the above-identified application.

- [ ] Also transmitted herewith are:  
[ ] Petition for extension under 37 C.F.R. 1.136  
[ ] Other:
- [X] Check(s) in the amount of **\$340.00** is/are attached to cover:  
[ ] Filing fee for additional claims under 37 C.F.R. 1.16  
[ ] Petition fee for extension under 37 C.F.R. 1.136  
[X] Other: **Statutory Appeal Fee**
- [X] The Assistant Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 50-0552.
- [X] Any filing fee under 37 C.F.R. 1.16 for the presentation of additional claims which are not paid by check submitted herewith.
- [X] Any patent application processing fees under 37 C.F.R. 1.17.
- [X] Any petition fees for extension under 37 C.F.R. 1.136 which are not paid by check submitted herewith, and it is hereby requested that this be a petition for an automatic extension of time under 37 CFR 1.136.

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I hereby certify that the documents referred to as attached therein and/or fee are being deposited with the United States Postal Service as "first class mail" with sufficient postage in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on Decemember 7, 2004.  
DAVIDSON, DAVIDSON & KAPPEL, LLC

BY:   
Jan Decker



[6001.1048]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Re: Application of: William Bellis SOMERS, et al.  
Serial No.: 09/551,445  
Filed: April 18, 2000  
For: FOLDING CYLINDER WITH EXPANSION  
SEGMENT  
Art Unit: 3721  
Examiner: Sameh TAWFIK

Mail Stop: APPEAL  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

October 20, 2004

**APPELLANTS' BRIEF UNDER 37 C.F.R. § 1.192**

Sir:

Appellants submit this brief for the consideration of the Board of Patent Appeals and Interferences (the "Board") in support of their appeal of the Final Rejection dated May 17, 2004 in this application. An original and two copies of this brief are submitted herewith. The statutory fee of \$340.00 is paid concurrently herewith.

**1. REAL PARTY IN INTEREST**

The real party in interest is Goss International Corporation having a place of business in Bolingbrook, Illinois and being the assignee of the entire right, title and interest in the above-identified patent application.

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## 2. RELATED APPEALS AND INTERFERENCES

Appellants, their legal representatives, and assignee are not aware of any appeal or interference that directly affects, will be directly affected by, or will have a bearing on the Board's decision in this appeal.

## 3. STATUS OF CLAIMS

Claims 1 to 11 and 14 to 18 are pending. Claims 12 and 13 have been canceled. Claims 1 to 11 and 14 to 18 have been finally rejected as per the Final Office Action dated May 17, 2004.

The rejection to claims 1 to 11 and 14 to 18 thus is appealed. A copy of appealed claims 1 to 11 and 14 to 18 is attached hereto as Appendix A.

## 4. STATUS OF AMENDMENTS AFTER FINAL

A Response to the Final Office Action was filed on July 26, 2004 and was entered by the Advisory Action of August 24, 2004.

## 5. SUMMARY OF THE INVENTION

The present invention provides a folding cylinder (e.g., 10 in Fig. 1, see, e.g., specification at page 4, lines 11 to 12) comprising a frame (e.g., 30 in Fig. 2, see, e.g., specification at page 4, lines 21 to 23) having a work-side support (e.g., 36 in Fig. 2, see, e.g., specification at page 4, lines 21 to 23) and a gear-side support (e.g., 32 in Fig. 2, see, e.g., specification at page 4, lines 21 to 23); at least one expansion segment (e.g., 16 in Figs. 1 and 2, see, e.g., specification at page 4, lines 17 to 18) for providing an effective diameter of the cylinder (e.g., 10 in Fig. 1, see, e.g., specification at page 4, lines 18 to 19), the expansion segment (e.g., 16 in Figs. 1 and 2, see, e.g., specification at page 4, lines 17 to 18) being located between the work-side support (e.g., 36 in Fig. 2, see, e.g., specification at page 4, lines 21 to 23) and the gear-side support (e.g., 32 in Fig. 2, see, e.g., specification at page 4, lines 21 to 23) and spaced apart from at least one of the work-side support (e.g., 36 in Fig. 2, see, e.g., specification at page 4, lines 21 to 23) and the gear-side support (e.g., 32 in Fig.

2, see, e.g., specification at page 4, lines 21 to 23), the expansion segment (e.g., 16 in Figs. 1 and 2, see, e.g., specification at page 4, lines 17 to 18) being movable so as to be non-evenly depressible over a width of the expansion segment (see, e.g., specification at page 2, lines 19 to 22 and page 5, lines 23 to page 6, line 1); and an actuating device (e.g. cam 40 in Fig. 2 and page 5, lines 9 to 12) for contacting the at least one expansion segment (e.g., 16 in Figs. 1 and 2, see, e.g., specification at page 4, lines 17 to 18) and setting the effective diameter.

The expansion segment (e.g. 16 in Figs 1 and 2) may include an outer section (e.g. 54 in Fig. 2 and specification at page 5, line 2) and a plurality of J-shaped brackets (e.g. 51, 52 in Fig. 2 and specification at page 5, line 10) connected to the outer section, a first J-bracket being spaced apart from the work-side support and a second J-bracket being spaced apart from the gear-side support (see, e.g., d1 and d2 in Fig. 3).

The frame (e.g. 30 in Fig. 2) may include a tie support (e.g. 34 in Fig. 3 and specification at page 4, line 22) between the gear-side and work-side supports, and further comprising a plurality of springs (e.g. 61, 62 in Fig. 3, and specification at page 5, line 7) on the tie support for forcing the expansion segment radially outwardly.

Foam pieces (e.g. 70, 71 in Fig. 3 and specification at page 5, line 16) may be fixed to the J-brackets (e.g. 51, 52 in Fig. 2 and specification at page 5, line 10) to be located in spaces between the expansion segment and the at least one of the gear-side and work side supports, and may have a friction reducing coating of TEFLON for example (e.g. specification at page 5, lines 15 to 22).

## 6. ISSUES

Whether claims 1 to 4, 6 to 11 and 14 to 18 should be rejected under 35 U.S.C. 103 as being unpatentable over Roettger. Whether claim 5 should be rejected under 35 U.S.C. 103 as being unpatentable over Roettger in view of Fischer.

## 7. GROUPING OF CLAIMS

Since all appealed claims do not stand or fall together, the following groupings are appropriate:

Group I:	Claims 1, 2, 11
Group II:	Claims 3 and 4
Group III:	Claim 5
Group IV:	Claims 6, 7 and 10
Group V:	Claims 8 and 9
Group VI:	Claims 14 to 18

## 8. ARGUMENTS

The issue presented is whether claims 1 to 4, 6 to 11 and 14 to 18 should be rejected under 35 U.S.C. 103 as being unpatentable over Roettger, and whether claim 5 should be rejected under 35 U.S.C. 103 as being unpatentable over Roettger in view of Fischer.

### GROUP I

Claim 1 of the present application recites a folding cylinder comprising:  
a frame having a work-side support and a gear-side support;

at least one expansion segment for providing an effective diameter of the cylinder, the expansion segment being located between the work-side support and the gear-side support and spaced apart from at least one of the work-side support and the gear-side support, the expansion segment being movable so as to be non-evenly depressible over a width of the expansion segment; and

an actuating device for contacting the at least one expansion segment and setting the effective diameter.

The fact that the expansion segment, for example element 16 in Fig. 3, is non-evenly depressible over the width is possible in the embodiment shown due to the springs 61, 62, 63 and distances d1 and d2. The segment 16 thus can depress unevenly, i.e. more at the left side than the right side in Fig. 3, as described for example at page 2, lines 19 to 22 and page 5, line 23 et seq. of the present specification. This helps prevent damage to the device if for example a paper jam occurs and paper becomes thicker on one side of the segment.

Roettger et al. does not disclose at all that segments 18 are unevenly depressible **over a width** of the segment 18. Roettgers segments 18 move together radially. Thus it is very clear that segments 18 are not unevenly depressible over the width, as the segments 18 are fixed with respect to the spindle 20. Thus as spindle 20 rotates, the segments 18 always have a same or even depression as the next segment 18. Thus no uneven depression over the width can or will occur.

There is absolutely no teaching or disclosure in Roettger otherwise and withdrawal of the rejection with respect to claim 1 and its dependent claims is respectfully requested.

#### Group II: Claims 3 and 4

The claims of Group II depend from claim 1, and claim 3 further recites wherein the expansion segment includes an outer section and a plurality of J-shaped brackets connected to the outer section, a first J-bracket being spaced apart from the work-side support and a second J-bracket being spaced apart from the gear-side support.

Roettger does not disclose J-shaped brackets at all, and it is not understood what the Final Office Action is identifying as J-shaped.

The open ends of the present J-shaped brackets help permit the uneven width deformation while permitting setting of an effective diameter.

Withdrawal of the rejection to claims 3 and 4 for this reason as well is respectfully requested.

#### Group III: Claim 5

Claim 5 depends from claim 1 of Group I and further recites a tie support between the gear-side and work-side supports, and further comprising a plurality of springs on the tie support for forcing the expansion segment radially outwardly.

Claim 5 was rejection over Roettger in view of Fischer.

The springs of Fischer are not on a tie support for forcing the expansion segment radially outwardly, and Roettger does not show springs. In addition there is no place or desire with Roettger to provide springs as claimed, as the eccentric would

not work without more features. (One embodiment of the present invention for example uses J-shaped brackets to permit diameter setting even with springs)

Withdrawal of the rejection of claim 5 is respectfully requested for this reason as well.

Group IV: Claims 6, 7 and 10

Claim 6 depends from claim 1 of Group I and further recites “a foam piece in a space between the expansion segment and the at least one of the gear-side and work side supports.”

There is no teaching or disclosure to provide such a foam piece in Roettger and it is not clear such a piece would be desirable in Roettger as there is no need to cushion the uneven width depressibility.

Withdrawal of the rejection to claims 6 and 7 for this reason as well is respectfully requested.

Group V: Claims 8 and 9

Claim 8 recites the folding cylinder as recited in claim 3 of Group II and recites a foam piece attached to a side of the first J-bracket.

Even if somehow a foam piece would have been obvious in a space of the Roettger device (and it is respectfully submitted that it would not have been), there is no teaching or disclosure to attach it to the side of a J-bracket.

Withdrawal of claims 8 and 9 is also respectfully requested.

Group VI: Claims 14 to 18

Independent claim 14 recites a folding cylinder comprising:  
a frame having a work-side support and a gear-side support;  
at least one expansion segment for providing an effective diameter of the cylinder, the expansion segment being located between the work-side support and the gear-side support and spaced apart from at least one of the work-side support and the gear-side support;

a foam piece having at least one friction-reducing surface in a space between

the expansion segment and the at least one of the gear-side and work-side supports;  
and

an actuating device for contacting the at least one expansion segment and  
setting the effective diameter.

There is absolutely no teaching or disclosure in Roettger to provide a foam piece  
with a friction-reducing surface in a space between the expansion segment and the  
supports as claimed, and there is no motivation provided to so modify Roettger, which  
appears to function without foam pieces. Since all pieces in Roettger are fixed, such foam  
pieces would merely increase friction and not lead to the solution of any problem  
identified in Roettger.

Withdrawal of the rejections to claims 14 to 18 is also respectfully requested.

Respectfully submitted,

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## **APPENDIX A:**

### **PENDING CLAIMS 1 to 11 and 14 to 18 OF U.S. APPLICATION SERIAL NO. 09/551,445**

Claim 1 (previously presented): A folding cylinder comprising:  
a frame having a work-side support and a gear-side support;  
at least one expansion segment for providing an effective diameter of the cylinder, the expansion segment being located between the work-side support and the gear-side support and spaced apart from at least one of the work-side support and the gear-side support, the expansion segment being movable so as to be non-evenly depressible over a width of the expansion segment; and  
an actuating device for contacting the at least one expansion segment and setting the effective diameter.

Claim 2 (original): The folding cylinder as recited in claim 1 wherein the at least one expansion segment is spaced-apart from both the work-side support and the gear-side support.

Claim 3 (original): The folding cylinder as recited in claim 1 wherein the expansion segment includes an outer section and a plurality of J-shaped brackets connected to the outer section, a first J-bracket being spaced apart from the work-side support and a second J-bracket being spaced apart from the gear-side support.

Claim 4 (original): The folding cylinder as recited in claim 3 wherein an end of the J-shaped brackets located opposite the outer section interacts with eccentrics on a camshaft, a rotational angle of the camshaft being adjustable.

Claim 5 (original): The folding cylinder as recited in claim 1 wherein the frame includes a tie support between the gear-side and work-side supports, and further comprising a plurality of springs on the tie support for forcing the expansion segment radially outwardly.

Claim 6 (original): The folding cylinder as recited in claim 1 further comprising a foam piece in a space between the expansion segment and the at least one of the gear-side and work side supports.

Claim 7 (original): The folding cylinder as recited in claim 2 further comprising foam pieces between the expansion segment and the work-side support and between the expansion segment and the gear side support.

Claim 8 (original): The folding cylinder as recited in claim 3 further comprising a foam piece attached to a side of the first J-bracket.

Claim 9 (previously presented): The folding cylinder as recited in claim 8 wherein the foam piece entirely covers the side of the first J-bracket.

Claim 10 (original): The folding cylinder as recited in claim 6 wherein the foam piece includes a friction-reducing coating.

Claim 11 (original): The folding cylinder as recited in claim 1 wherein the cylinder is a pin cylinder of a cross-folder.

Claims 12 and 13 (canceled).

Claim 14 (previously presented ): A folding cylinder comprising:  
a frame having a work-side support and a gear-side support;  
at least one expansion segment for providing an effective diameter of the cylinder, the expansion segment being located between the work-side support and the gear-side support and spaced apart from at least one of the work-side support and the gear-side support;  
a foam piece having at least one friction-reducing surface in a space between the expansion segment and the at least one of the gear-side and work-side supports;  
and

an actuating device for contacting the at least one expansion segment and setting the effective diameter.

Claim 15 (previously presented): The folding cylinder as recited in claim 14 wherein the foam piece has an adhesive located on a side opposite the friction-reducing surface.

Claim 16 (previously presented): The folding cylinder as recited in claim 14 wherein the foam piece is fixed with respect to the expansion segment and movable with respect to the at least one of the gear-side and work-side supports.

Claim 17 (previously presented): The folding cylinder as recited in claim 14 wherein the foam piece includes a friction-reducing coating so as to create the friction-reducing surface.

Claim 18 (previously presented): A folding cylinder comprising:

- a frame having a work-side support and a gear-side support;
- at least one expansion segment for providing an effective diameter of the cylinder, the expansion segment being located between the work-side support and the gear-side support;
- a first foam piece having at least one friction-reducing surface in a space between the expansion segment and the gear-side support;
- a second foam piece having at least one friction-reducing surface in a space between the expansion segment and the work-side support; and
- an actuating device for contacting the at least one expansion segment and setting the effective diameter.